

DOCUMENTED CHROMOSOME
NUMBERS 1990: 1. MISCELLANEOUS
NORTH AMERICAN VASCULAR PLANTS

BRUCE D. PARFITT, DONALD J. PINKAVA, DEBBIE RICKEL,
DAN FILLIPI, BETH EGGERS

*Department of Botany, Arizona State University
Tempe, AZ 85287-1601, U.S.A.*

DAVID J. KEIL

*Department of Biology
California Polytechnic State University
San Luis Obispo, CA 93402, U.S.A.*

The following meiotic chromosome counts are documented by specimens deposited in Herbarium of Arizona State University (ASU). Previously uncounted taxa are represented by an asterisk (*). A double asterisk (**) indicates a new number for the species.

METHODS

Flower buds were collected in developmental series from plants growing in native habitats. Buds were killed and fixed in chloroform, ethanol, and glacial acetic acid (6:3:1 v/v) or ethanol and glacial acetic acid (3:1 v/v), transferred to 70% ethanol after 24 hrs, and refrigerated. Anthers were squashed in iron/acetocarmine and mounted in Hoyer's medium (Beeks 1955).

Percentage positive pollen stainability was determined for the three *Penstemon* individuals for which chromosome counts were obtained. Pollen was taken from closed anthers of herbarium specimens and stained in aniline-blue lactophenol for 48 hrs (Maneval 1936). A minimum of 500 pollen grains per individual were scored. Percentage of staining, normal-size grains is indicated in parentheses after the chromosome number in the results below.

ANACARDIACEAE

**RHUS AROMATICA* Aiton var. *PILOSISSIMA* (Engl.) Shinn. *n* = 15. — ARIZONA, Yavapai Co.: NW side of Prescott, Arrowhead Dr, *Parfitt 3898 & Roberts*.

APOCYNACEAE

AMSONIA TOMENTOSA Torr. & Frem. var. TOMENTOSA. *n* = 11. — ARIZONA. Mohave Co.: jct. of Signal Rd & Alamo Rd NNW of Alamo Lake, *Parfitt 4181 & Christy*.

*CYCLADENIA HUMILIS Benth. *n* = 7. — UTAH. Grand Co.: Castle Valley, red clay slopes below Parriot Mesa, *Anderson 86-51*.

ASTERACEAE

BERLANDIERA LYRATA A. Gray var. MONOCEPHALA B. L. Turner. *n* = 15. CHIHUAHUA. Rte 14, near La Junta, *Pinkava 13334, 13339, McGill, Reeves & Nash*.

CHAENACTIS STEVIODES Hook. & Arn. *n* = 5. — ARIZONA. Apache Co.: Navajo Reservation, Hwy 12 ca. 5.7 mi NW of jct with Hwy 13, just N of Tsedadhotsosi (a tiny mesa), *Reeves 8273 & Parfitt*.

*CIRSIUM DRUMMONDII Torr. & Gray × C. WHEELERI (A. Gray) Petrak. *n* = 16. — ARIZONA. Apache Co.: Alpine Campground, 5 mi N of Alpine, *Landrum 5249 & Landrum*.

*HELENIUM ARIZONICUM Blake. *n* = 15 + 1B. — ARIZONA. Coconino Co.: AZ 260, near turnoff to Willow Springs Lake, T11N R14E S31, *Parfitt 3845 & Rickel*.

MACHAERANTHERA GRINDELIOIDES (Nutt.) Shinn. *n* = 4. — NEVADA. White Pine Co.: 38 mi W of Ely Cemetery, US 50, *Parfitt 3817 & Roberts*.

MACHAERANTHERA ASTEROIDES (Torr.) Greene var. GLANDULOSA B.L. Turner. *n* = 4. — ARIZONA. Yavapai Co.: Antelope Hills Golf Course, US 89, Prescott, *Fillipi 3*.

STEPHANOMERIA EXIGUA Nutt. var. EXIGUA. *n* = 8. — BAJA CALIFORNIA NORTE. 22.9 mi S of San Vicente, *Pinkava 11110, McGill, Hensel, & MacIntyre*.

STEPHANOMERIA PAUCIFLORA (Torr.) A. Nels. *n* = 8. — ARIZONA. Pinal Co.: 37.4 mi NW of Oracle Junction, *Pinkava 10993, Lebto & Hensel*.

BORAGINCEAE

**LITHOSPERMUM INCISUM Lehm. *n* = 14. — ARIZONA. Apache Co.: Navajo Reservation. SW slopes of Chuska Mts., ca. 3.2 mi NE of Tsaile, 36° 19' 20" N, 109° 10' 10" W, *Reeves 8302 & Parfitt*.

BRASSICACEAE

*PENNELIA LONGIFOLIA (Benth.) Rollins. *n* = 8. — ARIZONA.

Apache Co.: ca. 6 air mi E of Mt Baldy Peak, T6N R27E S14, *Parfitt 3852 & Rickel*.

CACTACEAE

OPUNTIA REPENS Bello. *n* = 11. — PUERTO RICO. ca. 4.4 mi SE of Boqueron along PR 303, *Keil 16512*.

CUCURBITACEAE

**MARAH GILENSIS* Greene. *n* = 15. — ARIZONA. Maricopa Co.: ca. 2.5 mi N of Sunflower, T6N R9E S4, *Parfitt 3731 & Bricker*.

ERICACEAE

**ARCTOSTAPHYLOS PRINGLEI* Parry. *n* = 13. — ARIZONA. Yavapai Co.: 1.1 mi E of Crown King, *Parfitt 3746, Bricker & Eggers*.

FABACEAE

**PSORALEA MEPHITICA* S. Wats. *n* = 11. — ARIZONA. Maricopa Co.: ca. 11 mi S of Sunflower, T4N R8E S2, *Parfitt 3732 & Bricker*.

VICIA PULCHELLA Kunth. *n* = 7. — ARIZONA. Apache Co.: White Mtns, 2.7 mi NE of jct Forest Service Rds 117 & 117a, near Carnero Lake, T8N R27E S6, *Parfitt 3874 & Rickel*.

LAMIACEAE

MENTHA ARVENSIS L. var. *VILLOSA* (Benth.) S. R. Stewart. *n* = 48. — ARIZONA. Coconino Co.: AZ 260, near turnoff to Willow Springs Lake, T11N R14E S31, *Parfitt 3848 & Rickel*.

RUTACEAE

**THAMNOSMA MONTANA* Torr. & Gray. *n* = 10. — CALIFORNIA. San Bernardino Co.: N side of Clark Mt, T17N R13E S15, *Parfitt 3586 & Baker*.

SCROPHULARIACEAE

**KECKIELLA ANTIRRHINOIDES* (Benth.) Straw ssp. *MICROPHYLLA* (Gray) Straw. *n* = 8. — ARIZONA. Maricopa Co.: 12.7 mi S of Sunflower, *Parfitt 3725 & Bricker*.

ORTHOCARPUS LUTEUS Nutt. *n* = 14. — ARIZONA. Apache Co.: ca. 6 air miles E of Mt. Baldy Peak, T6N R27E S14, *Parfitt 3854 & Rickel*.

PENSTEMON EATONII Gray ssp. *EATONII*. *n* = 8 (97.4%). — ARIZONA. Maricopa Co.: cult., 924 W. Watson Dr, Tempe, *Parfitt 3603*.

PENSTEMON PSEUDOSPECTABILIS Jones var. *CONNATIFOLIUS* (A. Nels.)

Keck. $n = 8$ (60.0%). — ARIZONA. Maricopa Co.: cult., 924 W. Watson Dr, Tempe, *Parfitt* 3601.

**PENSTEMON EATONII* ssp. *EATONII* × *P. PSEUDOSPECTABILIS* var. *CONNATIFOLIUS* (F1 hybrid, a volunteer resulting from natural pollination). $n = 8$ (36.2%). — ARIZONA. Maricopa Co.: cult., 924 W. Watson Dr, Tempe, *Parfitt* 3602.

ROSACEAE

Correction. The following was erroneously reported as *Rhus ovata* (*Parfitt et al.* 1985):

PRUNUS ILLICIFOLIA (Nutt.) Walp. $n = 15$. California. San Diego Co.: 117.2 mi W of Yuma, AZ, at jct. of CA 94 & I-8, *Gallagher* 82-9.

REFERENCES

- BEEKS, R. M. 1955. Improvements in the squash technique for plant chromosomes. *Aliso* 5:131-134.
 MANEVAL, W. E. 1936. Lactophenol preparations. *Stain Technol.* 11:9.
 PARFITT, B. D., M. A. Baker and M. L. Gallagher. 1985. IOPB chromosome number reports. LXXXVI. *Taxon* 35:162-163.